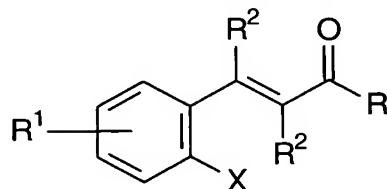
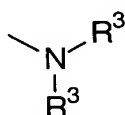


WHAT IS CLAIMED IS:

1. A photo-labile pro-fragrance conjugate having the formula:



wherein R is a unit capable of releasing a fragrance raw material having the formula:



wherein each R³ is independently hydrogen, substituted or unsubstituted C₁-C₃₀ hydrocarbyl, and mixtures thereof;

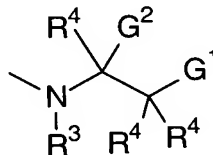
each R¹ is independently hydrogen, a unit which can substitute for hydrogen, C₁-C₁₂ substituted or unsubstituted hydrocarbyl unit;

each R² is independently hydrogen, C₁-C₁₂ substituted or unsubstituted hydrocarbyl unit, and mixtures thereof;

X is selected from the group consisting of -OH, -OC(O)R¹², -OC(O)OR¹², -NHR¹², and mixtures thereof; and

R¹² is H, C₁-C₁₂ substituted or unsubstituted alkyl, and mixtures thereof.

2. A conjugate according to Claim 1 wherein R has the formula:

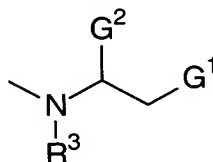


wherein each R⁴ is independently selected from the group consisting of:

- i) hydrogen;
- ii) C₁-C₂₂ substituted or unsubstituted, branched or unbranched alkyl;
- iii) C₂-C₂₂ substituted or unsubstituted, branched or unbranched alkenyl;
- iv) C₂-C₂₀ substituted or unsubstituted, branched or unbranched hydroxyalkyl;
- v) C₇-C₂₀ substituted or unsubstituted alkylenearyl;
- vi) C₃-C₂₀ substituted or unsubstituted cycloalkyl;
- vii) C₆-C₂₀ aryl;

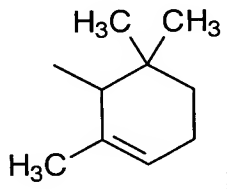
- viii) C₅-C₂₀ heteroaryl units comprising one or more heteroatoms selected from the group consisting of nitrogen, oxygen, sulfur, and mixtures thereof;
 - ix) two R⁴ units can be taken together to form one or more aromatic or non-aromatic, heterocyclic or non-heterocyclic, single rings, fused rings, bicyclo rings, spiroannulated rings, or mixtures thereof, said rings comprising from 3 to 20 carbon atoms and one or more heteroatoms selected from the group consisting of nitrogen, oxygen, sulfur, and mixtures thereof;
 - x) and mixtures thereof;
- G¹ and G² are each independently hydrogen, C₁-C₂₀ linear or branched hydrocarbyl, -Y, -C(O)Y, and mixtures thereof; Y is C₆-C₁₀ substituted or unsubstituted cyclic alkyl.

3. A conjugate according to Claim 2 wherein Y is selected from the group consisting of 2,6,6-trimethylcyclohex-2-enyl, 2,6,6-trimethylcyclohex-1-enyl, 2,6,6-trimethylcyclohex-1-enyl, 2,6,6-trimethylcyclohex-3-enyl, and mixtures thereof.
4. A conjugate according to Claim 1 wherein R has the formula:

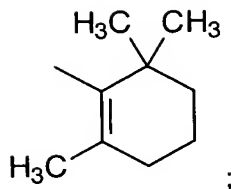


wherein G¹ and G² are each independently -CH₃, -C(O)CH₃, -Y, -C(O)Y, and mixtures thereof; Y is selected from the group consisting of:

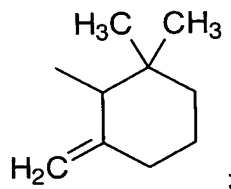
- i) 2,6,6-trimethylcyclohex-2-enyl having the formula:



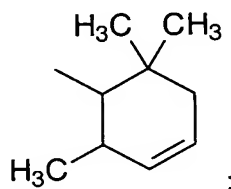
- ii) 2,6,6-trimethylcyclohex-1-enyl having the formula:



- iii) 2,6,6-trimethylcyclohex-1-enyl having the formula:

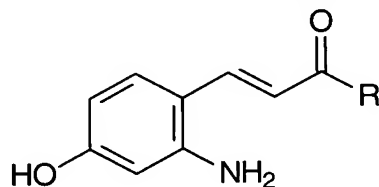


- iv) 2,6,6-trimethylcyclohex-3-enyl having the formula:



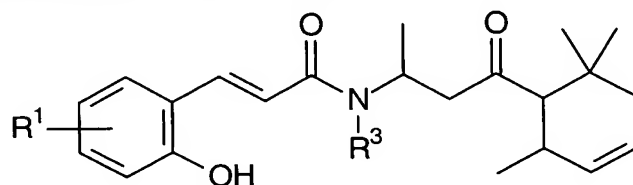
- v) and mixtures thereof.

5. A conjugate according to Claim 1 wherein X is -OH .
6. A conjugate according to Claim 1 wherein R^1 is hydrogen.
7. A conjugate according to Claim 1 wherein said conjugate has the formula:



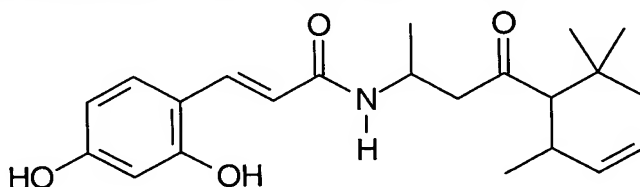
8. A conjugate according to Claim 1 wherein said R^1 is one or more electron donating groups selected from the group consisting of hydroxy, $\text{C}_1\text{-C}_{12}$ linear or branched alkoxy, $\text{-N(R}^{12})_2$, and mixtures thereof; R^{12} is H, $\text{C}_1\text{-C}_{12}$ alkyl, and mixtures thereof.

9. A conjugate according to Claim 8 wherein X is hydroxy.
10. A conjugate according to Claim 1 wherein R^2 are each hydrogen.
11. A conjugate according to Claim 1 having the formula:

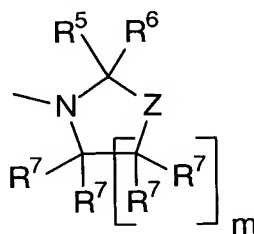


wherein R^1 is hydrogen, hydroxyl, and mixtures thereof.

12. A conjugate according to Claim 15 having the formula:



13. A conjugate according to Claim 1 wherein R has the formula:



wherein Z is oxygen or sulfur; m is from 1 to 3;

R^5 units are selected from:

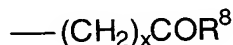
- C_6 - C_{22} substituted or unsubstituted linear alkyl
- C_6 - C_{22} substituted or unsubstituted branched alkyl;
- C_6 - C_{22} substituted or unsubstituted linear alkenyl;
- C_6 - C_{22} substituted or unsubstituted branched alkenyl;
- C_6 - C_{22} substituted or unsubstituted cycloalkyl;
- C_6 - C_{22} substituted or unsubstituted branched cycloalkyl;
- C_6 - C_{22} substituted or unsubstituted cycloalkenyl;

- h) C₆-C₂₂ substituted or unsubstituted branched cycloalkenyl;
- i) C₆-C₂₂ substituted or unsubstituted aryl;
- j) C₆-C₂₂ substituted or unsubstituted heterocyclicalkyl;
- k) C₆-C₂₂ substituted or unsubstituted heterocyclicalkenyl;
- l) and mixtures thereof;

R⁶ units comprise hydrogen or R⁵;

R⁷ is independently selected from the group consisting of:

- a) R⁶;
- b) hydroxyl;
- c) a carbonyl comprising unit having the formula:

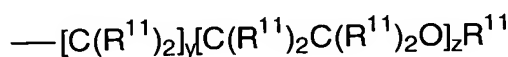


wherein R⁸ is:

- i) -OH;
- ii) -OR⁹ wherein R⁹ is hydrogen, C₁-C₁₅ substituted linear alkyl, C₁₁-C₁₅ unsubstituted linear alkyl, C₁-C₁₅ substituted branched alkyl, C₁₁-C₁₅ unsubstituted branched alkyl, C₂-C₂₂ substituted or unsubstituted linear alkenyl, C₃-C₂₂ substituted or unsubstituted branched alkenyl, or mixtures thereof,
- iii) -N(R¹⁰)₂ wherein R¹⁰ is hydrogen, C₁-C₆ substituted or unsubstituted linear alkyl, C₃-C₆ substituted or unsubstituted branched alkyl, or mixtures thereof;
- iv) C₁-C₂₂ substituted or unsubstituted linear alkyl;
- v) C₁-C₂₂ substituted or unsubstituted branched alkyl;
- vi) C₂-C₂₂ substituted or unsubstituted linear alkenyl;
- vii) C₃-C₂₂ substituted or unsubstituted branched alkenyl;
- viii) C₃-C₂₂ substituted or unsubstituted cycloalkyl;
- ix) C₆-C₂₂ substituted or unsubstituted aryl;
- x) C₆-C₂₂ substituted or unsubstituted heterocyclicalkyl;
- xi) C₆-C₂₂ substituted or unsubstituted heterocyclicalkenyl;

the index x is from 0 to 22;

- d) alkyleneoxy units having the formula:



wherein each R¹¹ is independently;

- i) hydrogen;
- ii) -OH;
- iii) C₁-C₄ alkyl;
- iv) or mixtures thereof;

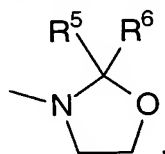
two R¹¹ units can be taken together to form a C₃-C₆ spiroannulated ring, carbonyl unit, or mixtures thereof; y has the value from 0 to 10, z has the value from 1 to 50;

- e) and mixtures thereof;

any two R⁷ units can be taken together to form:

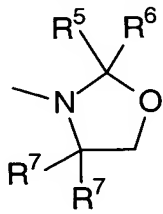
- i) a carbonyl moiety;
- ii) a C₃-C₆ spiroannulated ring;
- iii) a heterocyclic aromatic ring comprising from 5 to 7 atoms;
- iv) a non-heterocyclic aromatic ring comprising from 5 to 7 atoms;
- v) a heterocyclic ring comprising from 5 to 7 atoms;
- vi) a non-heterocyclic ring comprising from 5 to 7 atoms;
- vii) or mixtures thereof.

14. A compound according to Claim 13 wherein R has the formula:



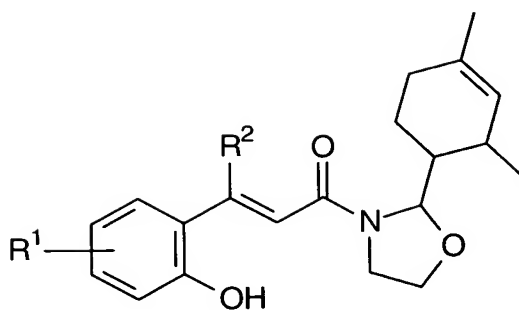
wherein R⁶ is selected from the group consisting of hydrogen and methyl.

15. A compound according to Claim 13 wherein R has the formula:

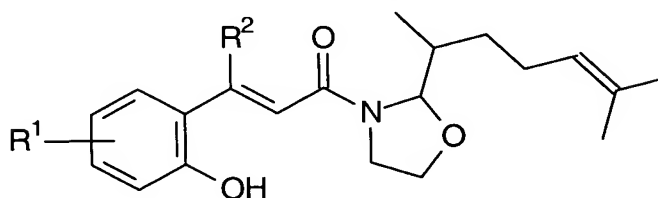


wherein R⁶ is selected from the group consisting of hydrogen and methyl; each R⁷ is independently hydrogen, methyl or -C(O)OR⁹, and mixtures thereof; R⁹ is hydrogen, C₁-C₁₂ alkyl, and mixtures thereof.

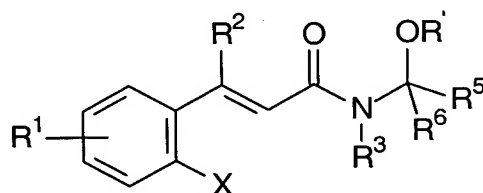
16. A composition according to Claim 13 having the formula:



17. A composition according to Claim 13 having the formula:

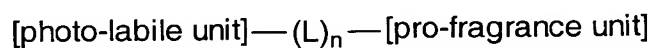


18. A compound according to Claim 11 having the formula:



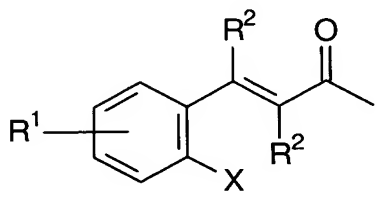
wherein R' is derived from an alcohol having the formula R'OH.

19. A photo-labile pro-fragrance conjugate having the formula:

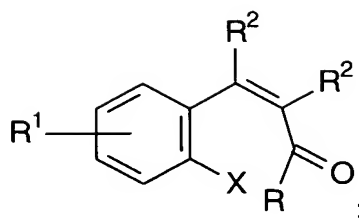


wherein said [photo-labile unit] is selected from the group consisting of:

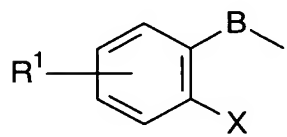
i)



ii)



iii)



wherein each R^1 is independently hydrogen, a unit which can substitute for hydrogen, C_1 - C_{12} substituted or unsubstituted hydrocarbonyl unit; said units which can substitute for hydrogen are selected from the group consisting of;

- i) $-NHCOR^{30}$;
- ii) $-COR^{30}$;
- iii) $-COOR^{30}$;
- iv) $-COCH=CH_2$;
- v) $-C(=NH)NH_2$;
- vi) $-N(R^{30})_2$;
- vii) $-NHC_6H_5$;
- viii) $=CHC_6H_5$;
- ix) $-CON(R^{30})_2$;
- x) $-CONHNH_2$;
- xi) $-NHCN$;
- xii) $-OCN$;
- xiii) $-CN$;
- xiv) F, Cl, Br, I, and mixtures thereof;
- xv) $=O$;
- xvi) $-OR^{30}$;
- xvii) $-NHCHO$;
- xviii) $-OH$;
- xix) $-NHN(R^{30})_2$;
- xx) $=NR^{30}$;
- xxi) $=NOR^{30}$;
- xxii) $-NHOR^{30}$;

- xxiii) -CNO;
- xxiv) -NCS;
- xxv) $=C(R^{30})_2$;
- xxvi) $-SO_3M$;
- xxvii) $-OSO_3M$;
- xxviii) -SCN;
- xxix) $-P(O)H_2$;
- xxx) $-PO_2$;
- xxxi) $-P(O)(OH)_2$;
- xxxii) $-SO_2NH_2$;
- xxxiii) $-SO_2R^{30}$;
- xxxiv) $-NO_2$;
- xxxv) $-CF_3$, $-CCl_3$, $-CBr_3$;
- xxxvi) and mixtures thereof;

wherein R^{30} is hydrogen, C_1 - C_{20} linear or branched alkyl, C_6 - C_{20} aryl, C_7 - C_{20}

alkylenearyl, and mixtures thereof; M is hydrogen, or a salt forming cation;

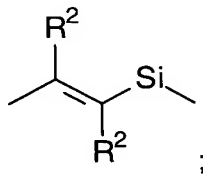
each R^2 is independently hydrogen, C_1 - C_{12} alkyl, and mixtures thereof; X is

selected from the group consisting of $-OH$, $-NHR^{12}$, and mixtures thereof; R^{12} is

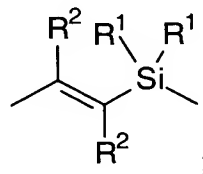
H, C_1 - C_{12} alkyl, and mixtures thereof;

B is selected from the group consisting of:

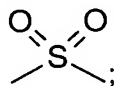
i)



ii)

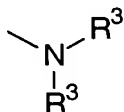


iii)



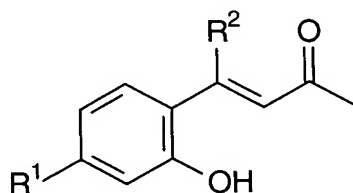
L units are $-\text{OC}(\text{O})-$, $-\text{NR}^3\text{C}(\text{O})-$, $-\text{OC}(\text{R}^3\text{R}^4)-$, $-\text{C}(\text{O})-$, and mixtures thereof; n is 0 or 1;

the [pro-fragrance unit] has the formula:



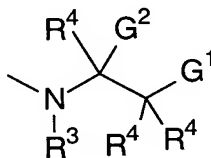
wherein each R^3 is independently hydrogen, substituted or unsubstituted C_1 - C_{30} hydrocarbyl, and mixtures thereof.

20. A compound according to Claim 19 wherein said [photo-labile unit] has the formula:



wherein R^1 is hydrogen, hydroxyl, and mixtures thereof.

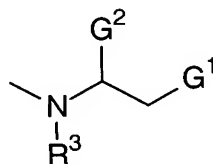
21. A compound according to Claim 19 wherein said [pro-fragrance unit] has the formula:



wherein each R^4 is independently selected from the group consisting of:

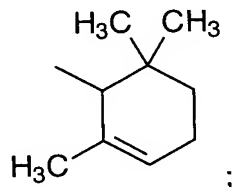
- i) hydrogen;
- ii) C_1 - C_{22} substituted or unsubstituted, branched or unbranched alkyl;
- iii) C_2 - C_{22} substituted or unsubstituted, branched or unbranched alkenyl;
- iv) C_2 - C_{20} substituted or unsubstituted, branched or unbranched hydroxyalkyl;
- v) C_7 - C_{20} substituted or unsubstituted alkylenearyl;
- vi) C_3 - C_{20} substituted or unsubstituted cycloalkyl;
- vii) C_6 - C_{20} aryl;
- viii) C_5 - C_{20} heteroaryl units comprising one or more heteroatoms selected from the group consisting of nitrogen, oxygen, sulfur, and mixtures thereof;

- ix) two R^4 units can be taken together to form one or more aromatic or non-aromatic, heterocyclic or non-heterocyclic, single rings, fused rings, bicyclo rings, spiroannulated rings, or mixtures thereof, said rings comprising from 3 to 20 carbon atoms and one or more heteroatoms selected from the group consisting of nitrogen, oxygen, sulfur, and mixtures thereof;
- x) and mixtures thereof;
- G^1 and G^2 are each independently hydrogen, C_1 - C_{20} linear or branched hydrocarbyl, $-Y$, $-C(O)Y$, and mixtures thereof; Y is C_6 - C_{10} substituted or unsubstituted cyclic alkyl.
22. A compound according to Claim 21 wherein Y is selected from the group consisting of 2,6,6-trimethylcyclohex-2-enyl, 2,6,6-trimethylcyclohex-1-enyl, 2,6,6-trimethylcyclohex-1-enyl, 2,6,6-trimethylcyclohex-3-enyl, and mixtures thereof.
23. A compound according to Claim 19 wherein said [pro-fragrance unit] has the formula:

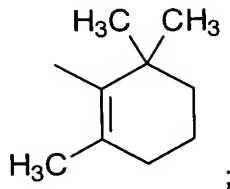


wherein G^1 and G^2 are each independently $-CH_3$, $-C(O)CH_3$, $-Y$, $-C(O)Y$, and mixtures thereof; Y is selected from the group consisting of:

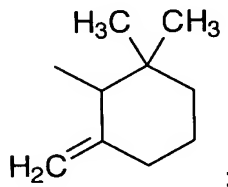
- i) 2,6,6-trimethylcyclohex-2-enyl having the formula:



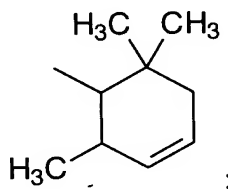
- ii) 2,6,6-trimethylcyclohex-1-enyl having the formula:



- iii) 2,6,6-trimethylcyclohex-1-enyl having the formula:



- iv) 2,6,6-trimethylcyclohex-3-enyl having the formula:



- v) and mixtures thereof.

24. A photo-labile pro-fragrance conjugate delivery system comprising:
- from about 0.001% by weight, of a photo-activated pro-fragrance conjugate according to Claim 1; and
 - the balance carriers and adjunct ingredients.
25. A laundry detergent comprising:
- from about 0.001% by weight, of a photo-activated pro-fragrance conjugate according to Claim 1;
 - from about 10% by weight, of a deterative surfactant; and
 - the balance carriers and adjunct ingredients.
26. A perfume or fine fragrance comprising:
- from about 0.001% by weight, of a photo-activated pro-fragrance conjugate according to Claim 1;

- B) from about 0.01% to about 99% by weight, of an admixture of fragrance raw materials; and
 - C) the balance carriers and adjunct ingredients.
27. A hair shampoo or conditioner comprising:
- A) from about 0.001% by weight, of a photo-activated pro-fragrance conjugate according to Claim 1;
 - B) from about 0.01% to about 5% by weight, of an admixture of fragrance raw materials; and
 - C) the balance carriers and adjunct ingredients.